

Amendments to the Claims

1. (previously presented) A system for providing a digital television data broadcast service, comprising:

a data service authoring subsystem operable to receive an audiovisual program and to author key clips, wherein key clips are comprised of one of either at least one key event or at least one key object, and provide key clip data in a defined format identifying the key clips of the audiovisual program, wherein said defined format identifying key clips of an audiovisual program further comprises an identification of the content of the key clip, wherein said content includes events and objects associated with said key clip;

a data service encoder operable to receive said key clip data and Program and System Information Protocol data, wherein key clip data includes descriptors that directly correspond to descriptors in the Program and System Information Protocol data, and finalize contents of said data broadcast service; and

an MPEG-2 system multiplexer operable to multiplex said contents of said data broadcast service with encoded audiovisual programs and produce a MPEG-2 transport stream to be broadcast to at least one client receiver in a format that allows customization at the receiver.

2. (currently amended) The system as claimed in claim 1, wherein said key clips are ~~references~~ referenced using Program and System Information Protocol system time.

3. (previously presented) The system as claimed in claim 1, wherein said key clips are referenced using Local Time reconstructed in the receiver from transmitted MPEG-2 Program Clock References (PCR) and Local Time References pair.

4. (original) The system as claimed in claim 3, wherein said system includes a video reference generator.

5. (original) The system as claimed in claim 1, wherein said key clips are referenced using starting and ending flags transmitted in synchronization with an element of said audiovisual program.

6. (original) The system as claimed in claim 1, wherein said defined format identifying key clips of an audiovisual program further comprises starting and ending references for said key clips.

7. (canceled)

8. (currently amended) A receiver operable to receive and operate upon a digital television data broadcast service, comprising:

a demultiplexing and decoding module to extract program-related information, wherein the program-related information further comprises an MPEG-2 encoded audiovisual program, Program and System Information Protocol (PSIP) information data, and an audio visual program description and references to key-clips from the digital television data broadcast service;

a summarizer operable to receive the audiovisual program PSIP data information and references to key-clips and to create summaries of the audiovisual program, using the references to key-clips to extract the key-clips from the program, wherein the summarizer includes an inference engine operable to combine said audiovisual program description with said PSIP information, wherein descriptors in the audiovisual program description directly correspond to descriptors in the PSIP information, user preferences, and any other available program information to produce program-related information and key-clip information;

a navigation module operable to allow a user to browse said program-related information;

a short-term memory to allow short-term storage of the summaries; and

a long-term memory to allow long-term storage of the programs and the summaries, wherein the long-term storage is accessible from the navigation module.

9. (previously presented) The receiver as claimed in claim 8, wherein said decoding and demultiplexing module is operable to produce program-related information for within-program filtering of audiovisual programs.

10. (previously presented) The receiver as claimed in claim 8, wherein said program-related information further comprises description information usable as indices for database archival of said audiovisual programs.

11. (previously presented) The receiver as claimed in claim 8, wherein said receiver further comprises a register of user preferences, wherein said decoding and demultiplexing module and said summarizer use said user preferences in generating said program-related information and said summaries.

12. (previously presented) A program summarizer operable to receive a data broadcast service for filtering and generating summaries of audiovisual programs, comprising:

a description extraction module operable to parse and extract an audiovisual program description provided by said data broadcast service;

a program and system information extraction module operable to extract the program and system information protocol (PSIP) information and MPEG-2 System Information from said data broadcast service;

an inference engine operable to combine said audiovisual program description with said PSIP information, where descriptors in the audiovisual program information directly correspond to descriptors in the PSIP information, user preferences, and any other available program information to produce program-related information and key-clip information;

a key-clip map table operable to take said key-clip information and produce a map of video references and times;

a key clip extraction module operable to extract key clips from said audiovisual program using references to the key clips in the data broadcast service; and

a summary composition module operable to produce summaries of said audiovisual program and provide it to a viewer.

13. (canceled)

14. (original) The summarizer of claim 12, wherein said any other available program information further comprises information downloaded from a web site.